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# An Analytical Compact Modelling Of Graphene Transistor

**D. Joseph**

Abstract - Literature review revealed exciting semi metal Graphene techniques. An analytical appropriate model for graphene FET device is proposed in the present paper. At initial stage Meric's compact model had been used by showing trap model where the equivalent circuit is evaluated. We show trasps have an effect on the transconductance and proceeds spontaneously the whole design, on an advanced GFET by having a transit frequency of about 10 GHz the model has been verified by comparing to DC and Ac measurements verses bias frequency. An LNA has been designed and despite the poor voltage gain of the GIFET, the LNA shows interesting performance when input and output matching of the circuit is performed. A power gain of |S21| = 4.2 dB is obtained, the reverse isolation is about |S12| = -10.6 dB, the rollet stability factor key is 1.25and the noise figure is 3.9 dB at 800 MHz.